

## METHOD AND APPARATUS FOR CURRENT CONTROLLED TRANSIENT REDUCTION IN A VOLTAGE REGULATOR

5

### ABSTRACT

A method and apparatus for substantially eliminating ripple and transient voltage using a current controlled voltage regulator. Current control (460) senses load current ( $i_L$ ) changes and produces control voltage ( $V_{\text{CONTROL}}$ ) in response to the load current changes. The control voltage increases the conductivity state of shunt transistor (470) such that any deficit of current caused by load changes at load (420) during a positive voltage transient is conducted through shunt transistor (470). The control voltage decreases the conductivity state of shunt transistor (470) such that any excessive current caused by load (420) during a negative voltage transient is balanced by the reduction of current in shunt transistor (470).